Your requirements

- Compact – ideal for restricted space applications
- Insertion of the workpiece possible from above
- High flexibility in the application – various “add on” options
- Reduced clamping forces are sufficient in order to fix the workpiece securely

The solution

- The new pneumatic swing clamps from DE-STA-CO

Special features

- Built-in model and mounted model by means of body mount flange, End mount flange, mounting feet (accessories)
- Freely adjustable left-hand, right-hand, linear stroke (20 mm diameter not linear adjustable)
- Double-acting cylinder
- Workpiece control with sensors (Accessories)
- Lightweight aluminium body
- Piston rod, hard-chrome plated
- Seal washer and wiper ring as one component
- Lifetime of several million cycles
- Operation with oil-free air also permissible

Adjustment of the swivel direction

1. Unscrew the guide bolt
2. Adjust the piston rod until the required swivel flute (right, left, linear) is congruent with the body’s borehole of the guide bolt
3. Screw the guide bolt again and tighten it
4. Take care that the seal ring is fixed correctly

Technical data

- Cylinder diameter:
  20 mm, 32 mm, 40 mm, 50 mm, 63 mm
- Clamping strokes: 10 mm, 25 mm, 50 mm
  (upon request for diameters 40, 50 and 63 mm)
- Clamping forces: 130 N to 1,600 N (at 8 bar)

Operating instruction

You can receive from us a pdf-file of the operating instruction.
You can also download it on our homepage on www.destaco.de

Practical tips

- Rotational movement of clamp arm should not be restricted
- Clamping operation should not be occured during the swivelling motion
- Release the clamping arm from the piston rod by tapping only from below and not from the side

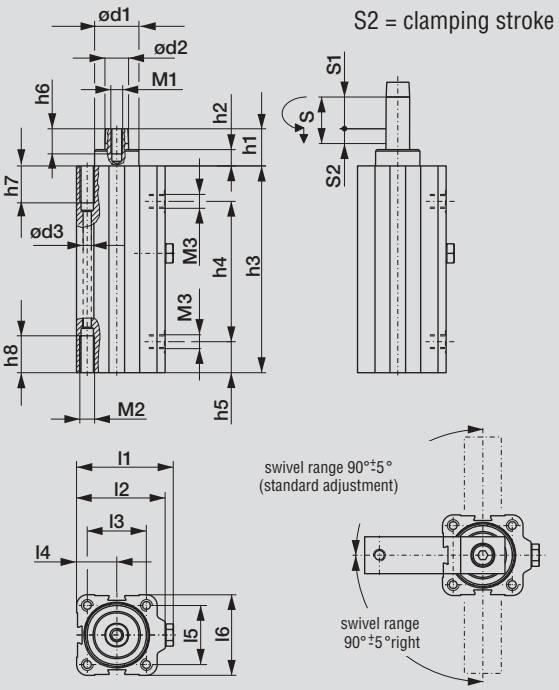
Adjustment of swiveling direction

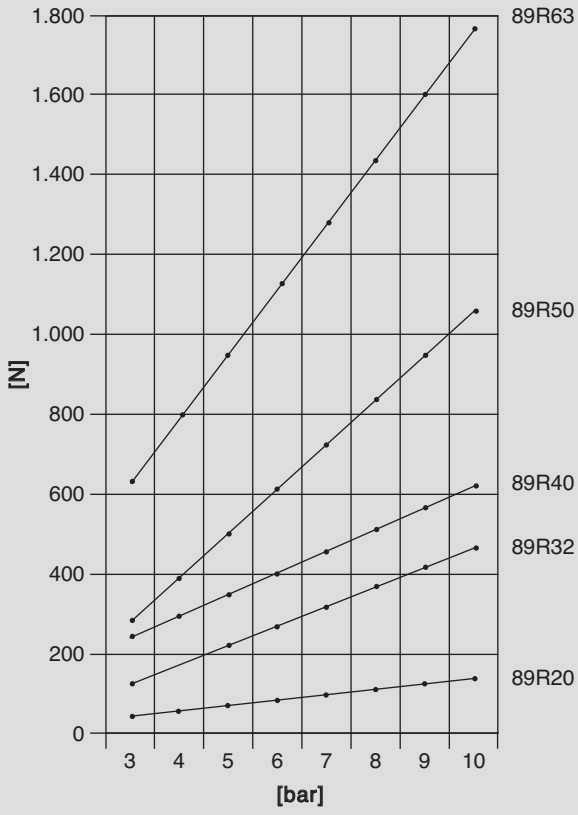
- see manual

Assembling clamping bar

- see manual

Specifications



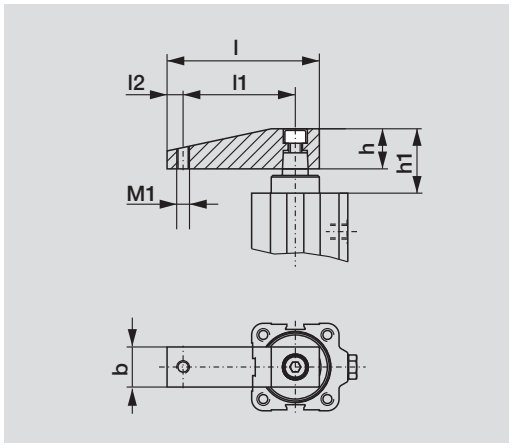


Clamping force diagram

Model no.	Total stroke S [mm]	Swivel stroke S1 [mm]	Clamping stroke S2 [mm]	Operating pressure min. [bar]	Operating pressure max. [bar]	Clamping force at 6 bar [N]	Piston dia. S1 [mm]	Air consumption per double stroke at 6 bar [l]	Weight [kg]
89R20-010-1	21,0	11,0	10	2	10	96	20	0,23	0,30
89R32-010-1	28,0	18,0	10			300	32	0,42	0,60
89R40-010-1	31,5	21,5	10			456	40	0,63	0,95
89R40-025-1	46,5	21,5	25			456	40	0,85	1,10
89R50-025-1	52,0	27,0	25			744	50	1,37	1,80
89R63-025-1	58,5	33,5	25			1.170	63	2,33	2,80

Model no.	øD1 [H9]	øD2 [F7]	øD3	H1	H2	H3	H4	H5	H6	H7	H8	L1	L2	L3	L4	L5	L6	M1	M2	M3
89R20-010-1	18	10	4,6	19,8	8	105,5	66,0	13,2	15	14	14	39,5	35,0	22	16,0	22	32	M5	M6	M5
89R32-010-1	22	12	5,5	23,7	11	125,0	83,0	17,5	17	16	16	60,0	54,0	36	24,0	32	45	M6	M8	G1/8
89R40-010-1	30	16	5,5	25,0	11	140,0	95,0	21,0	17	25	25	66,0	60,0	40	27,3	40	54,5	M8	M8	G1/8
89R40-025-1	30	16	5,5	25,0	11	170,0	125,0	21,0	17	25	25	66,0	60,0	40	27,3	40	54,5	M8	M8	G1/8
89R50-025-1	40	18	7,4	31,4	11	194,5	137,0	26,7	25	25	25	78,5	72,5	50	32,5	50	65	M10	M10	G1/8
89R63-025-1	45	20	9,3	33,0	15	211,5	154,5	26,5	25	25	25	95,0	88,0	62	40,0	62	80	M10	M12	G1/4

Clamping Arm

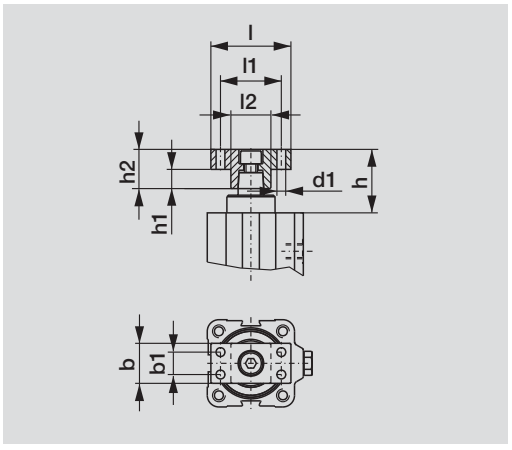


Product features

- For standard use
- 360° freely adjustable
- Adjusting spindle is an accessory part (see page 14.1 following)
- Made of aluminium

Model no.	Order no. Clamping Arm	l	l1	l2	h	h1	M1	b	Weight [kg/pc.]
89R20-010-1	8JG-215-1	67	52	7	15	27.8	M6	15	0.035
89R32-010-1	8JG-217-1	80	60	10	20	35.7	M8	20	0.065
89R40-010-1	8JG-218-1	95	70	10	25	40.0	M8	25	0.125
89R40-025-1	8JG-218-1	95	70	10	25	40.0	M8	25	0.125
89R50-025-1	8JG-219-1	106	80	10	30	48.4	M8	30	0.190
89R63-025-1	8JG-220-1	120	90	12	35	53.0	M10	35	0.300

Adaptor



Product features

- For attaching custom made clamping arms
- 360° freely adjustable
- Made of aluminium

Advice

General directions see manual.

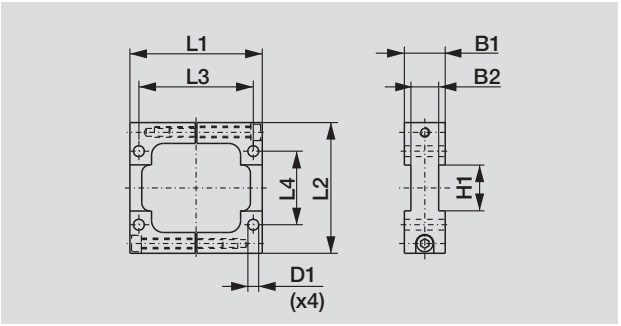
Model no.	Order no. Adaptor	l	l1 ±0,2	l2	h	h1	h2	d1	b ±0,2	b1	Weight [kg/pc.]
89R20-010-1	8MA-084-1	40	28	16	27.8	7	15	5.5	15	–	0.014
89R32-010-1	8MA-086-1	50	35	20	35.7	9	20	5.5	20	–	0.035
89R40-010-1	8MA-087-1	50	38	25	40.0	12	25	5.5	25	14	0.050
89R40-025-1	8MA-087-1	50	38	25	40.0	12	25	5.5	25	14	0.050
89R50-025-1	8MA-088-1	60	45	30	48.4	15	30	7.0	30	15	0.085
89R63-025-1	8MA-089-1	65	48	32	53.0	18	35	9.0	35	18	0.125

Specifications

Body Mount Flange

Product features

- For use as a built-in model
- Infinitely variable height adjustment
- Can be used with end position sensors
- Made of aluminium

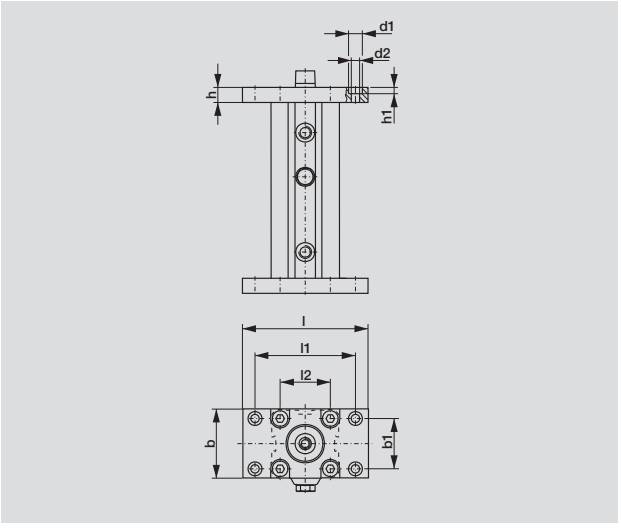


Model no..	Order no. Body Mount Flange	L1	L2	L3	L4	D1	B1	B2	H1	Weight [kg/pc.]
89R20-010-1	8MA-092-1	57	55	47	24	5,5	15	–	–	0,100
89R32-010-1	8MA-094-1	81	75	70	40	6,6	20	12	25	0,200
89R40-010-1	8MA-095-1	81	80	70	45	6,6	25	17	28	0,250
89R40-025-1	8MA-095-1	81	80	70	45	6,6	25	17	28	0,250
89R50-025-1	8MA-096-1	101,5	100	85,5	50	9	25	17	37	0,400
89R63-025-1	8MA-097-1	122	120	104	68	11	30	20	38	0,650

End Mount Flange

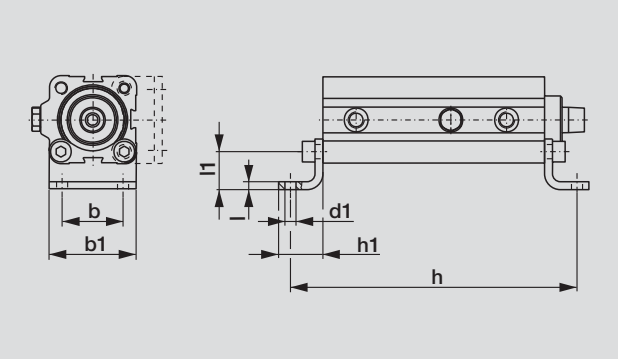
Product features

- For use as a mounted model
- Can be mounted on bottom side and top side
- Made of aluminium



Model no.	Order no. End Mount Flange	H	H1	D1	D2	L	L1 ±0,2	B	B1 ±0,2	Weight [kg/pc.]
89R20-010-1	8MA-061-1	10	7	11	6,6	65	50	32	18	0,030
89R32-010-1	8MA-063-1	12	7	11	6,6	80	64	50	32	0,090
89R40-010-1	8MA-064-1	12	7	11	6,6	100	80	55	40	0,130
89R40-025-1	8MA-064-1	12	7	11	6,6	100	80	55	40	0,130
89R50-025-1	8MA-065-1	15	9	15	8,5	120	100	65	45	0,210
89R63-025-1	8MA-066-1	15	9	15	8,5	130	110	80	60	0,300

Mounting Feet

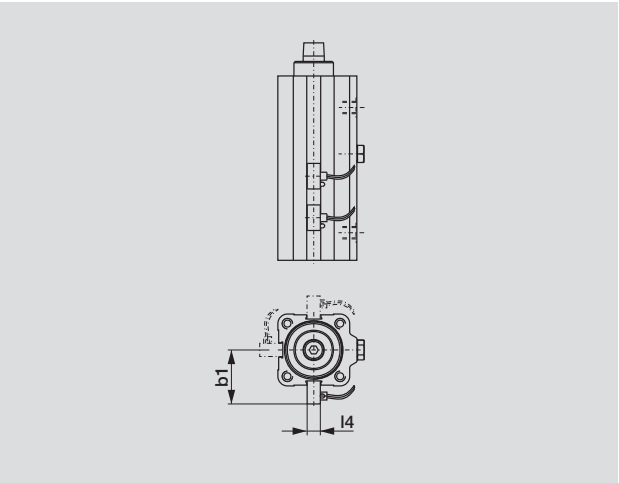


Product features

- Can be mounted on bottom side and front side
- Can be mounted on 4 sides of the cylinder
- Made of aluminium

Model no.	Order no. Mounting Feet	H	H1	D1	L	L1	B	B1	Weight [kg/pc.]
89R20-010-1	8MW-018-1	137,5	22	7	4	16	22	35	0,035
89R32-010-1	8MW-020-1	166,0	28	7	4	18	35	50	0,070
89R40-010-1	8MW-021-1	181,0	28	7	5	24	40	55	0,100
89R40-025-1	8MW-021-1	211,0	28	7	5	24	40	55	0,100
89R50-025-1	8MW-022-1	238,5	32	9	6	24	50	67	0,150
89R63-025-1	8MW-023-1	263,5	40	11	6	27	62	85	0,235

Magnetic Sensors



Product features

- Workpiece control possible on 3 sides of the cylinder
- Continuously adjustable by means of dovetailed groove
- Usable for built-in models and mounted models

Sensors for magnetic field workpiece control system (SME-3-LED) with integrated protective circuit and light-emitting diode (PNP output)

Model no..	Order no. Magnetic Sensors	B1	L4	Weight [kg/pc.]
89R20-010-1	SME-3-LED	31,0	10,5	0,04
89R32-010-1	SME-3-LED	37,5	10,5	0,04
89R40-010-1	SME-3-LED	42,3	10,5	0,04
89R40-025-1	SME-3-LED	42,3	10,5	0,04
89R50-025-1	SME-3-LED	47,5	10,5	0,04
89R63-025-1	SME-3-LED	55,0	10,5	0,04

Technical Data

- Medium: magnetic field and electric current
- Type of design: electrical signal transmitter for contactless position indication
- Type of attachment: clamping in longitudinal keyway
- Connection: 3-core cable, 2.5 m, max. 10 W/500 mA/12-27 V AC/DC
- Type of protection in accordance with DIN 40050: IP 66
- Temperature range: fixed cable installation -20 to + 60° C, moveable cable installation -5 to + 60° C
- Material: housing GD-Mg, cable PVC

Screw-in version

Application areas

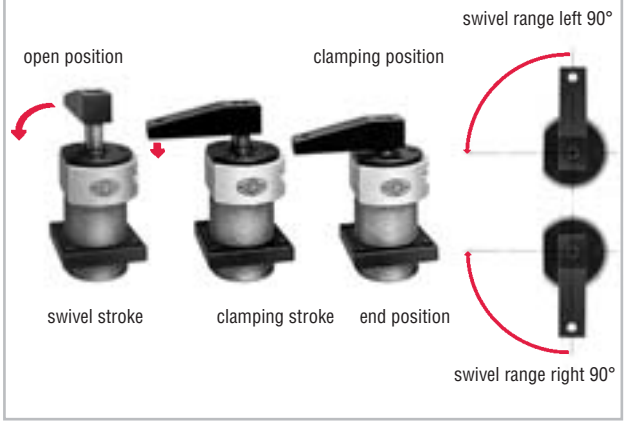
The compact design and high reliability of the DE-STA-CO pneumatic swing clamping elements makes them suitable for applications where rapid and unobstructed access to the clamping station is required

Product features

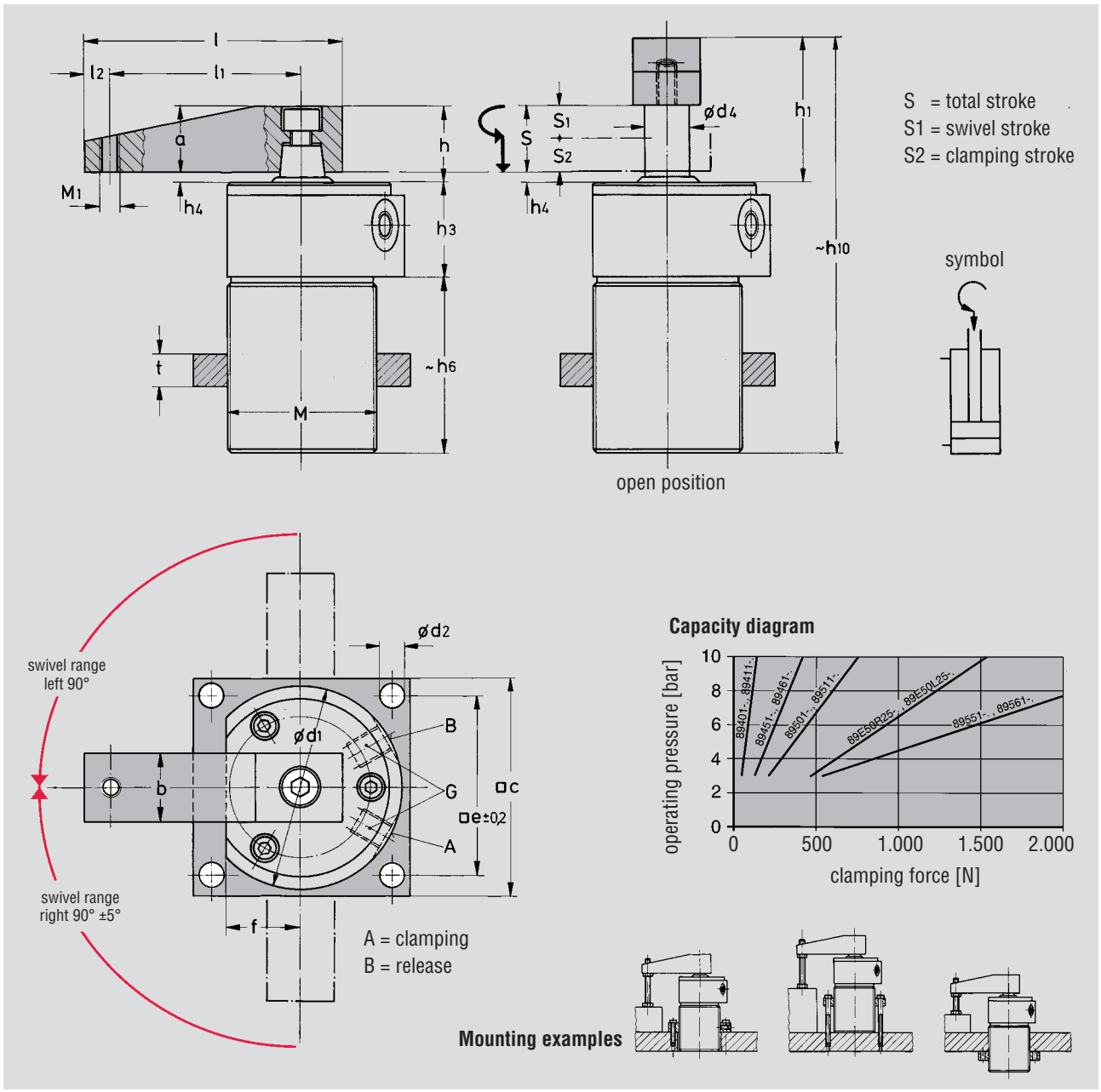
- double acting
- linear clamping stroke 10 mm and 25 mm
- clamping force from 140 N to 1.700 N
- service life of several millions of cycles
- accessories
  - standard clamp arm
  - adaptor for mounting self made clamp arms
- Srew-in design without end position sensing

Srew-in design without end position sensing

Motion sequence of the clamping element



	Swivel clamping elements				clamping force at 8 bar [N]	accessories (order seperately)			
	swivel right		swivel left			clamp arm	adaptor for self made clamp arm	flange	adjustment spindles
	Model no.		Model no.			Model no.	Model no.	Model no.	
	without sensing systems	with sensing systems	without sensing systems	with sensing systems					
screw-in design	89401-4	–	89411-4	–	140	8940-3-SP	8940-2-AD	8940-2-FL	
	89451-4	–	89461-4	–	350	8945-2-SP	8945-2-AD	8945-2-FL	see
	89501-4	–	89511-4	–	620	8950-2-SP	8950-2-AD	8950-2-FL	page
	89E50R25-4	–	89E50L25-4		1.100	89SP-50-2	89AD-50-2	89FL-50-2	14.1
	89551-4	–	89561-4	–	1.700	8955-2-SP	8955-2-AD	8955-2-FL	



Operation with oil-free air is permissible

Model no. swivel right	Model no. swivel left	total stroke S	swivel stroke S1	clamping stroke * S2	operating pressure min. [bar]	operating pressure max. [bar]	piston-Ø	air consumption per double strole at 8 bar [l]	a	b	□ c	Ød1	Ød2	Ød4	□ e
89401-4	89411-4	20	10	10	3	8	20	0,15	16	16	55	48	6,6	10	42
89451-4	89461-4	21	11	10	3	10	30	0,4	20	20	70	64	9	12	54
89501-4	89511-4	24	14	10	3	10	40	0,7	25	25	80	75	9	16	66
89E50R25-4	89E50L25-4	40	15	25	3	10	50	1,7	30	30	90	90	9	18	76
89551-4	89561-4	26	18	8	3	10	63	1,8	35	35	110	105	11	20	90

*The swivel clamping elements may only be loaded within the clamping stroke S2

Model no. swivel right	Model no. swivel left	f	G	h	h1	h3	h4	h6	~h10	l	l1	l2	M	M1	t	weight ~ [kg]
89401-4	89411-4	19	M 5	18,5	38,5	28	2,5	60	126,5	67	52	7	M36x1,5	M 6	8	0,28
89451-4	89461-4	22,5	G 1/8	23	44	25	3	69	138	80	60	10	M42x1,5	M 8	10	0,40
89501-4	89511-4	27,5	G 1/8	29	53	35	4	66	154	95	70	10	M55x2	M 8	12	0,71
89E50R25-4	89E50L25-4	34,5	G 1/8	34	74	38	4	104	216	106	80	10	M68x2	M 8	15	1,32
89551-4	89561-4	40	G 1/4	39	65	38	4	77	180	120	90	12	M80x2	M 10	15	2,10

Block version

Application areas

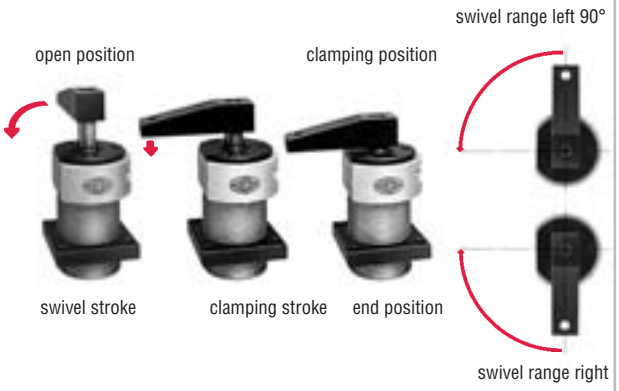
The compact design and high reliability of the DE-STA-CO pneumatic swing clamping elements makes them suitable for applications where rapid and unobstructed access to the clamping station is required

Product features

- With end position sensing
- double acting
- linear clamping stroke 10 mm and 25 mm
- clamping force from 140 N to 1.700 N
- service life of several millions of cycles
- accessories
  - standard clamp arm
  - adaptor for mounting self made clamp arms

Block design without end position sensing

Motion sequence of the clamping element



Block design with end position sensing

Standard equipment:

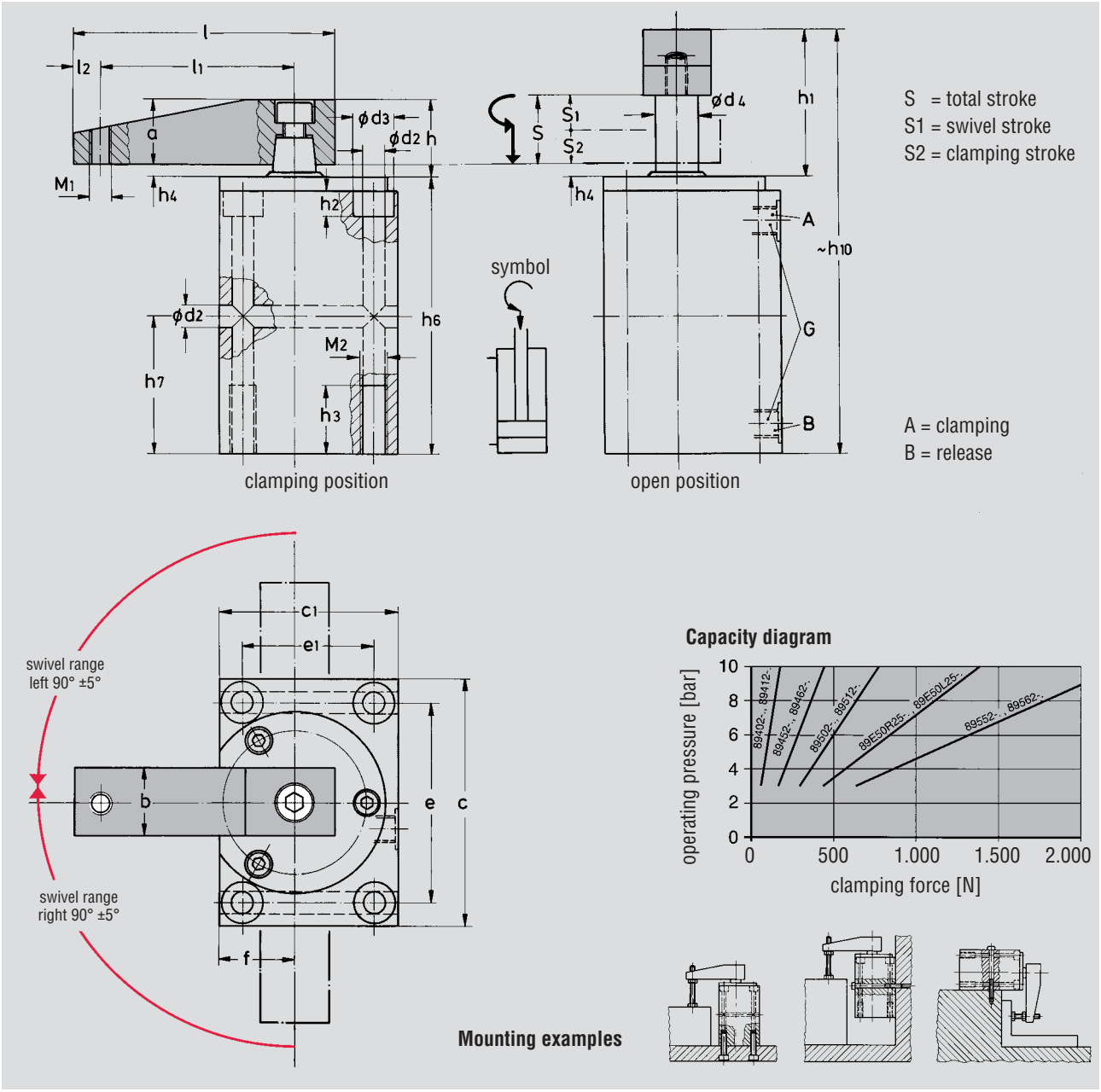
2 sensors
(SME-3-LED)

Technical date see p. 13.10

Important:

For further details concerning sensing and the use of sensors, please see the operating instructions MA89

	Swivel clamping elements				clamping force at 8 bar [N]	**accessories** (order seperately)		
	swivel right		swivel left			clamp arm	adaptor for self made clamp arm	adjustment spindles
	Model no.		Model no.					
	without sensing systems	with sensing systems	without sensing systems	with sensing systems		Model no.	Model no.	
block design 	89402-4	89402-4A	89412-4	89412-4A	140	8940-3-SP	8940-2-AD	
	89452-4	89452-4A	89462-4	89462-4A	350	8945-2-SP	8945-2-AD	
	89502-4	89502-4A	89512-4	89512-4A	620	8950-2-SP	8950-2-AD	see p. 14.1
	89B50R25-4	89B50R25-4A	89B50L25-4	89B50L25-4A	1.100	89SP-50-2	89AD-50-2	
	89552-4	89552-4A	89562-4	89562-4A	1.700	8955-2-SP	8955-2-AD	



Operation with oil-free air is permissible

Model no. swivel right	Model no. swivel left	total stroke S	swivel stroke S1	clamping stroke * S2	oper. pressure min. [bar]	oper. pressure max. [bar]	piston-Ø	air consumption per double stroke at 8 bar [l]	a	b	c	c1	Ød2	Ød3	Ød4	e
89402-4u.4A	89412-4u.4A	20	10	10	3	8	20	0,15	16	16	75	45	6,6	11	10	60
89452-4u.4A	89462-4u.4A	21	11	10	3	10	30	0,4	20	20	85	55	8,5	15	12	68
89502-4u.4A	89512.-4u.4A	24	14	10	3	10	40	0,7	25	25	90	65	8,5	15	16	73
89B50R25-4/-4A	89B50L25-4/-4A	40	15	25	3	10	50	1,7	30	30	110	75	10,5	18	18	90
89552-4u.4A	89562-4u.4A	26	18	8	3	10	63	1,8	35	35	120	90	10,5	18	20	100

*The swivel clamping elements may only be loaded within the clamping stroke S2

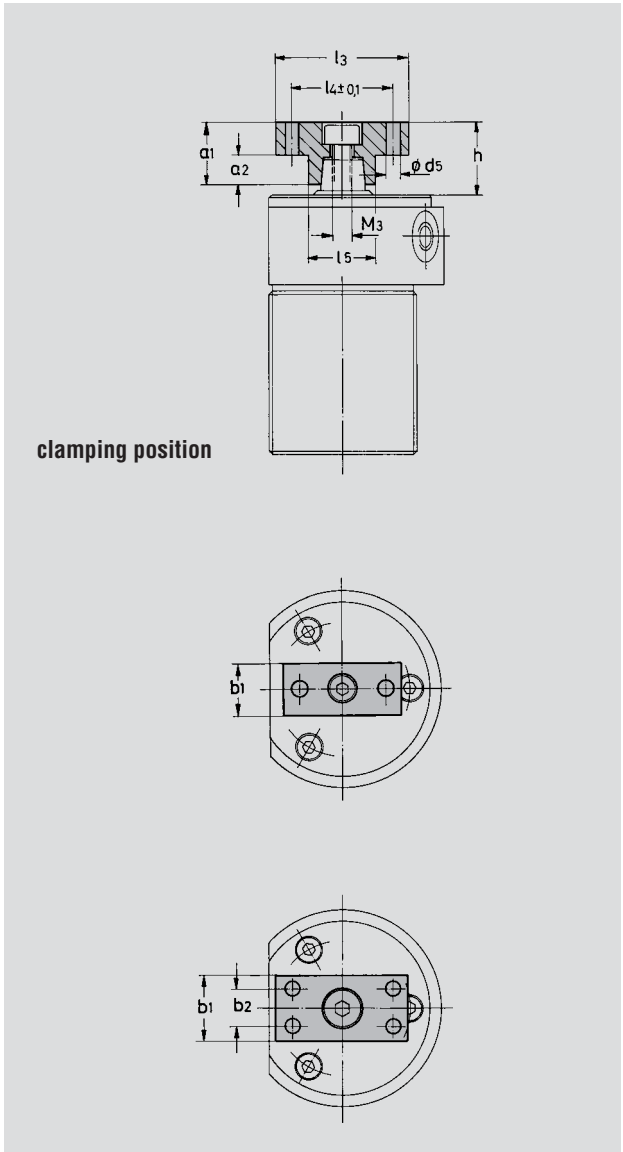
Model no. swivel right	Model no. swivel left	e1	f	G	h	h1	h2	h3	h4	h6	h7	~h10	l	l1	l2	M1	M2	weight ~ [kg]
89402-4u.4A	89412-4u.4A	30	19	M 5	18,5	38,5	7	20	2,5	88	40	126,5	67	52	7	M 6	M 8	0,77
89452-4u.4A	89462-4u.4A	38	22,5	G 1/8	23	44	9	25	3	94	45	138	80	60	10	M 8	M 10	1,10
89502-4u.4A	89512-4u.4A	48	27,5	G 1/8	29	53	9	25	4	101	50	154	95	70	10	M 8	M 10	1,48
89B50R25-4/-4A	89B50L25-4/-4A	55	34	G 1/8	34	74	11	30	4	140	70	214	106	80	10	M 8	M 12	2,60
89552-4u.4A	89562-4u.4A	70	40	G 1/4	39	65	11	30	4	115	55	180	120	90	12	M 10	M 12	2,83

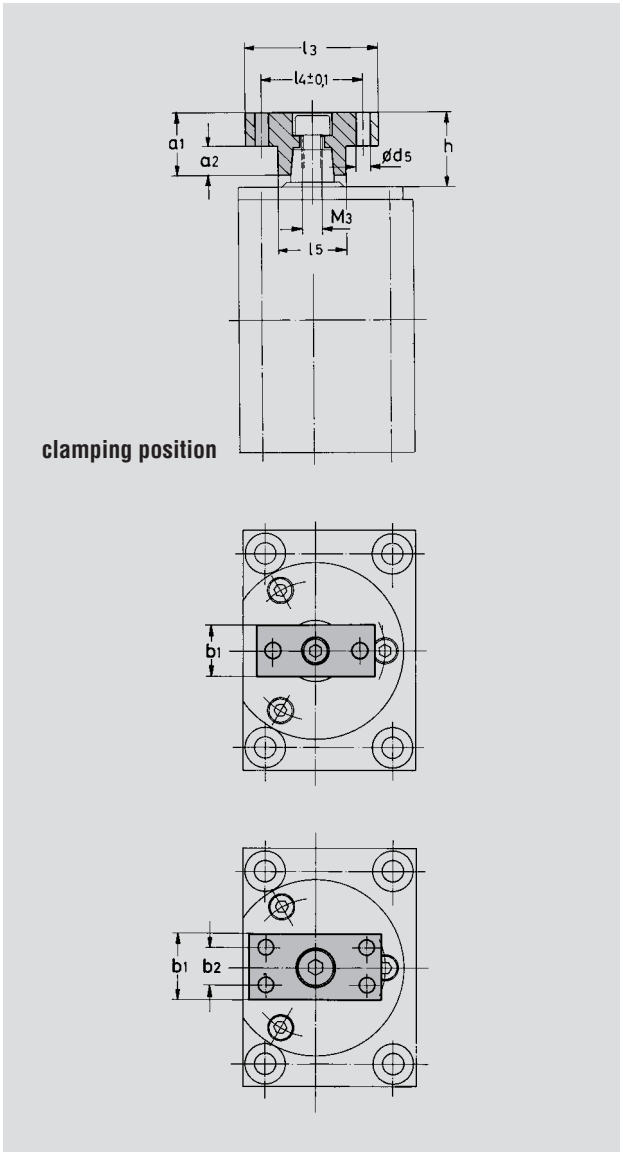
Adaptor for screw-in version and block version

Safe connection

The adaptors were developed to ensure a reliable connection between your shop-made clamp arms and the swing clamp´s piston rod. Please ensure that the dimension of the clamping point of your shop-made clamp arm is identical to the dimension l1 specified in the tables on pages 13.2 and 13.4. If the dimension l1 increases, the operating pressure must be reduced by the same percentage.

Example: If the dimension l1 is increased 10% above the value specified in the tables, the operating pressure must be reduced by 10%.





	Model. no. swivel right	Model. no. swivel left	appropriate adaptor Model no.	a1	a2	b1	b2	Ød5	h	l3	l4	l5	M3
screw-in design	89401-4	89411-4	8940-2-AD	16	8	16	–	5,5	18,5	40	28	16	M 5
	89451-4	89461-4	8945-2-AD	19	9	20	–	6,6	22	45	33	20	M 6
	89501-4	89511-4	8950-2-AD	24,5	12	25	14	5,5	28,5	50	38	25	M 8
	89E50R25-4	89E50L25-4	89AD-50-2	29	18	30	16	7	33	60	45	30	M 10
	89551-4	89561-4	8955-2-AD	32	18	32	16	9	36	65	48	32	M 10
block design	89402-4u.4A	89412-4u.4A	8940-2-AD	16	8	16	–	5,5	18,5	40	28	16	M 5
	89452-4u.4A	89462-4u.4A	8945-2-AD	19	9	20	–	6,6	22	45	33	20	M 6
	89502-4u.4A	89512-4u.4A	8950-2-AD	24,5	12	25	14	5,5	28,5	50	38	25	M 8
	89B50R25-4u.4A	89B50L25-4u.4A	89AD-50-2	29	18	30	16	7	33	60	45	30	M 10
	89552-4u.4A	89562-4u.4A	8955-2-AD	32	18	32	16	9	36	65	48	32	M 10